

What is claimed:

1. A surgical probe comprising:
 - a handpiece defining a first internal channel;
 - a rigid cannula fixed to said handpiece to prevent relative translational movement therebetween, said cannula having a second internal channel extending to a distal tip;
 - an optical fiber extending through said first and second internal channels, said optical fiber having a distal end portion positionable adjacent said distal tip, said distal end portion having a preformed bend that is straightened in a retracted position within said rigid cannula, and that is curved when in an extended position in which said distal end portion extends beyond said distal tip of said rigid cannula;
 - a mechanism that selectively causes translational movement of said optical fiber relative to said handpiece, thereby causing said distal end portion of said optical fiber to move between said retracted and extended positions; and
 - 15 a rigid sleeve enclosing at least a portion of said optical fiber, said mechanism being attached to said rigid sleeve, said rigid sleeve supporting said optical fiber and being capable of translating with said optical fiber upon operation of said mechanism.
- 20 2. The surgical probe of claim 1, said mechanism comprising a button fixedly attached to said optical fiber, said button being selectively translatable to cause corresponding translational movement of said optical fiber relative to said handpiece, thereby causing said distal end portion of said optical fiber to move

between said retracted and extended positions, said button extending in a radial direction relative to an axis of said cannula.

3. The surgical probe of claim 2, wherein said distal end portion extends substantially within a plane when in said extended position, and wherein said radial direction extends substantially within said plane, substantially in said radial direction.

4. The surgical probe of claim 3, wherein said handpiece is constructed of a first material, said optical fiber is positioned within said first internal channel without any material intermediate said first material and said optical fiber, and wherein said button is constructed of a second material different from said first material.

5. The surgical probe of claim 4, wherein said first material comprises acetal resin and said second material comprises polyetheretherketone.

6. The surgical probe of claim 5, wherein said distal end portion of said core of said optical fiber is enclosed in a resiliently deformable flexible tube constructed of a shape memory material.

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7. The surgical probe of claim 6, wherein said tube is constructed of nitinol.

8. A surgical probe comprising:

a handpiece defining a first internal channel;

a rigid cannula fixed to said handpiece to prevent relative translational movement therebetween, said cannula having a second internal channel extending 5 to a distal tip;

an optical fiber extending through said first and second internal channels, said optical fiber having a distal end portion positionable adjacent said distal tip, said distal end portion having a preformed bend that is straightened when in a retracted position within said rigid cannula, and that is curved when in an extended position in 10 which said distal end portion extends beyond said distal tip of said rigid cannula, said distal end portion extending substantially within a plane when in said extended position; and

15 a button fixedly attached to said optical fiber, said button being selectively translatable to cause corresponding translational movement of said optical fiber relative to said handpiece, thereby causing said distal end portion of said optical fiber to move between said retracted and extended positions, said button extending in a radial direction relative to an axis of said cannula, said radial direction extending substantially within said plane, substantially in said radial direction.

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9. The surgical probe of claim 8, further comprising:

a rigid sleeve enclosing a portion of said optical fiber, said button being attached to said rigid sleeve, said rigid sleeve supporting said optical fiber and being capable of translating with said optical fiber and said button upon translation of said

button.

10. The surgical probe of claim 9, wherein said rigid sleeve is adhesively bonded to a portion of said optical fiber.

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11. The surgical probe of claim 10, wherein said button is mechanically fastened to said rigid sleeve.

12. The surgical probe of claim 9, said button comprising a stem portion joined to said fiber extending in a radial direction relative to an axis of said cannula, said button further comprising a head portion joined to said stem portion, said head having an area greater than a cross-sectional area of said stem portion.

13. A surgical probe comprising:
15 a handpiece defining a first internal channel;
a rigid cannula fixed to said handpiece to prevent relative translational movement therebetween, said cannula having a second internal channel extending to a distal tip;
an optical fiber extending through said first and second internal channels,
20 said optical fiber having a distal end portion positionable adjacent said distal tip, said distal end portion having a preformed bend that is straightened when in a retracted position within said rigid cannula, and that is curved when in an extended position in which said distal end portion extends beyond said distal tip of said rigid cannula; and

a button fixedly attached to said optical fiber, said button being selectively translatable to cause corresponding translational movement of said optical fiber relative to said handpiece, thereby causing said distal end portion of said core to move between said retracted and extended positions, said button comprising a stem portion joined to said fiber extending in a radial direction relative to an axis of said cannula, said button further comprising a head portion joined to said stem portion, said head having an area greater than a cross-sectional area of said stem portion.

14. The surgical probe of claim 13, further comprising:

10 a rigid sleeve enclosing a portion of said optical fiber, said button being attached to said rigid sleeve, said rigid sleeve supporting said optical fiber and being capable of translating with said optical fiber and said button upon translation movement of said button.

15 15. The surgical probe of claim 14, wherein said rigid sleeve is adhesively bonded to a portion of said optical fiber.

16. The surgical probe of claim 15, wherein said head portion comprises a plurality of ridges extending in a direction transverse to a direction of elongation of
20 said handpiece.

17. The surgical probe of claim 16, wherein said distal end portion extends substantially within a plane when in said extended position, and wherein said radial

direction extends substantially within said plane, substantially in said radial direction.

18. The surgical probe of claim 16, wherein said handpiece is constructed of a first material, said optical fiber is positioned within said first internal channel
5 without any material intermediate said first material and said optical fiber, and wherein said button is constructed of a second material different from said first material.

19. The surgical probe of claim 18, wherein said first material comprises
10 acetal resin and said second material comprises polyetheretherketone.

20. The surgical probe of claim 14, wherein said distal end portion of said core of said optical fiber is enclosed in a resiliently deformable flexible tube
constructed of a shape memory material.

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21. The surgical probe of claim 20, wherein said tube is constructed of
nitinol.

22. The surgical probe of claim 21, wherein said cannula has an interior
20 surface and a layer of friction-reducing material between said interior surface and
said optical fiber.